

Blower Upgrade Replacement Project



Brockton Massachusetts Advanced Water Reclamation Facility

Brockton's Advanced Water Reclamation Facility



The Brockton Advanced Water Reclamation Facility (facility), located at 303 Oak Hill Way, was built in 1963 with a designed capacity of 18 million-gallons-per-day (mgd). The facility services the entire City of Brockton (City) and the neighboring towns of Abington and Whitman. In the 2000s, the facility underwent a \$100 million overhaul partially sponsored by the state and federal government that increased its design capacity to 20.5 mgd and provided continued compliance with the City's NPDES discharge permit. The upgrades included replacement of process equipment and lighting with more efficient options, resulting in substantial annual electrical savings.

Starting in 2017, the City began upgrading their aeration system by replacing four older, inefficient positive displacement blowers with state-of-the-art, energy efficient turbo blowers. The aeration process of adding air into wastewater allows for aerobic biodegradation of the pollutant component; an integral part of biological



wastewater treatment systems. In 2017, the first of the four positive displacement blowers were replaced.

In 2018, Brockton received a \$200,000 grant to help furnish and install the second turbo blower. The grant was part of the Gap II Grant Funding program, awarded by the Massachusetts Department of Environmental Protection (MassDEP). The new turbo blower has a working life of over 80,000 hours and is projected to have a savings of approximately \$41,000/year and 293,000 kwh/year. Like the 2017 blower replacement, the new turbo blower will perform the equivalent of two existing positive displacement blowers. The new turbo blower was furnished and installed in December 2018. The City plans to replace the third and fourth blowers by 2020.



Annual Cost	= \$41,000
Annual Savings	
Annual Energy Savings	= 293,000 kwh/year
Pay Back Period	= 2.5 years

Gap II Grant Funding

In April 2018, MassDEP awarded \$4 million of state Gap Grant Funding to jump-start over \$17 million of clean energy improvement projects in Massachusetts. The \$4 million in funding was awarded to 36 clean energy projects. In total, these 36 clean energy projects will save facilities \$1.3 million annually, generate approximately 9.68 megawatt hours in annual electricity savings or on-site energy generation, and leverage \$1.15 million in additional energy utility incentives.

For more information on the Gap II Grant Funding program, visit: <https://www.mass.gov/news/baker-polito-administration-awards-4-million-for-energy-efficiency-and-renewable-energy>



This project is funded in part by a grant from the Massachusetts Department of Environmental Protection